**Unit Planner Chapter 3 Technology Differentiation Critical Thinking**

**Teacher: Solek Unit Title: Systems of Equations and Inequalities**

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| **Standards / Benchmarks:**  N 5 Selecting and using appropriate computational methods and tools  N7 Justifying reasonableness of solutions and verifying results  A1 Demonstrating the ability to translate real-world situations into algebraic expressions and equations  A2 Recognize the relationship between real number operations and algebraic operations  A3 Use tables and graphs as tools to interpret algebraic expressions, equations and inequalities  A4 Solving algebraic equations  G1 Identifying, describing, comparing, constructing and classifying geometric figures in two and three dimensions  G6 Demonstrating deductive reasoning and mathematical justification | | |
| **Standards Analysis:**  **Students should know:**  •Why are there different forms for writing linear equations?  •What is the graphical representation of the solutions(s) to a system of linear equations?  •What different techniques are used to factor polynomials, and what strategies can be employed to determine which factoring method to use?  **Students should be able to:**   1. Solve systems of linear equations by graphing 2. Determine whether a system of linear equations is consistent and independent, consistent and dependent, or inconsistent. 3. Solve systems of linear equations by using substitution 4. Solve systems of linear equations by using elimination 5. Solve systems of in-equalities by graphing 6. Determine the coordinates of the vertices of a region formed by the graph of a system 7. of inequalities 8. Solve systems of equations in three variables—show calculator method for matrix solving 9. Solve real-world problems using systems of linear equations in three variables | **Critical Questions or Statements**:   1. Why is it necessary to have several methods to solve systems of equations? When would you use each method? 2. The general form of an equation for a parabola is y = + bx + c, where (x, y) is a point on the parabola. Determine the values of a,b c for the parabola and write the general form of the equation. | **Relevance:**  Discussion on solutions for one linear equation and solution for two or more linear equations and how there are infinitely many for a linear equation, but where there are two equations, there is one solution, all points on the line are a solution, or the lines do not cross, and there are no solutions |
| **Pre-assessment tools / strategies:**   1. Cumulative Review Ch 2 activity 2. Getting started activity p. 100 in text 3. Daily online self checks @glencoe.com 4. 5 minute checks in resources 5. Using a calculator to graph a linear equation | **Differentiation strategies:**   1. Think pair share 2. Work with a group formed by Kagan strategies 3. Create your own problem, share with group 4. Present your reasoning 5. Choose \_\_\_\_problems from this assignment 6. Create your own quiz/test on a given objective |

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| **Final Assessment(s) - Body of Evidence:**  Vocabulary Test  Unit Test | **Instructional Strategies:**   1. Graph equations tell if consistent and independent, consistent and dependent or inconsistent selected problems from page 113 2. Use Kagan strategy “find someone who” put problems on index cards 3. Students graph in pairs then share with class on projector or graph board 4. Students make up systems of equations that are parallel 5. Students make up systems of equations that are perpendicular 6. Examples presented in a number of ways—  * Teacher on board * Student on board * Student in one note * Student on poster * Teacher on power point * Teacher on one note |
| **Formative assessments / assignments**   1. Skills 3-1 2. selected problems from page 113 3. Skills 3-2 4. Selected problems from page 125 # 1- 7 5. Mixed review in preparation for midterm exam page 127 6. Graphing Calculator Investigation page 128 7. Skills 3-3 8. mixed review p. 115 # 58 – 79 9. Quiz 10. Skills 3-5 11. practice test page 149 # 1 - 20 | |